



Atty. Dkt. No. 032026-0734

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Denes et al.

Title: PLASMA-ENHANCED  
FUNCTIONALIZATION OF  
CARBON-CONTAINING  
SUBSTRATES

Appl. No.: 10/807,914

Filing Date: 03/24/2004

Examiner: Unknown

Art Unit: 3742

|   |
|---|
| <p><b>CERTIFICATE OF MAILING</b></p> <p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below.</p> <p><u>Michelle Manning</u><br/>(Printed Name)</p> <p><u><i>Michelle Manning</i></u><br/>(Signature)</p> <p><u>07/28/04</u><br/>(Date of Deposit)</p> |
|---|

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO-1449 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

**RELEVANCE OF EACH DOCUMENT**

All of the documents are in English.

Applicants respectfully request that any listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO-1449 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2350. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2350.

Respectfully submitted,

Date

July 28, 2004

FOLEY & LARDNER LLP

Customer Number: 23524

Telephone: (608) 258-4305

Facsimile: (608) 258-4258

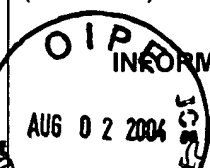
By

Michelle Marnin

Michelle Marnin

Attorney for Applicant

Registration No. 50,592

|  |  |                                 |                          |
|--|--|---------------------------------|--------------------------|
| Form PTO-1449<br>(MODIFIED)  | U.S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE | ATTY. DOCKET NO.<br>032026-0734 | SERIAL NO.<br>10/807,914 |
|  <p>INFORMATION DISCLOSURE CITATION</p> <p>(Use several sheets if necessary)</p> |  | APPLICANT<br>Denes et al.       |                          |
|  |  | FILING DATE<br>03/24/2004       | GROUP ART UNIT<br>3742   |

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | REF | DOCUMENT<br>NUMBER | DATE     | NAME             | CLASS | SUB-<br>CLASS | FILING DATE<br>IF<br>APPROPRIATE |
|---------------------|-----|--------------------|----------|------------------|-------|---------------|----------------------------------|
|                     |     | 2003/0163198 A1    | 8/28/03  | Morra et al.     |       |               |                                  |
|                     |     | 5,080,924          | 1/14/92  | Kamel et al      |       |               |                                  |
|                     |     | 5,132,108          | 7/21/92  | Narayanan et al  |       |               |                                  |
|                     |     | 5,306,768          | 4/26/94  | Hsu et al        |       |               |                                  |
|                     |     | 5,336,518          | 8/9/94   | Narayanan et al  |       |               |                                  |
|                     |     | 6,022,902          | 2/8/00   | Koontz           |       |               |                                  |
|                     |     | 6,159,531          | 12/12/00 | Dang et al.      |       |               |                                  |
|                     |     | 6,306,506          | 10/23/01 | Timmons et al.   |       |               |                                  |
|                     |     | 6,402,899          | 6/11/02  | Denes et al      |       |               |                                  |
|                     |     | 6,528,264          | 3/4/03   | Pal et al.       |       |               |                                  |
|                     |     | 6,602,692          | 8/5/03   | Glusenkamp et al |       |               |                                  |
|                     |     | 6,630,358          | 10/7/03  | Wagner et al.    |       |               |                                  |
|                     |     |                    |          |                  |       |               |                                  |

## FOREIGN PATENT DOCUMENTS

|  | REF | DOCUMENT<br>NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |    |
|--|-----|--------------------|------|---------|-------|---------------|-------------|----|
|  |     |                    |      |         |       |               | YES         | NO |
|  |     |                    |      |         |       |               |             |    |
|  |     |                    |      |         |       |               |             |    |
|  |     |                    |      |         |       |               |             |    |
|  |     |                    |      |         |       |               |             |    |

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

|  |  |  |
|--|--|--|
|  |  | Rasmussen, et al., "Covalent Immobilization of DNA into Polystyrene Microwells: The Molecules are only Bound at the 5' End," <i>Analytical Biochemistry</i> , <b>198</b> , pp. 138-142, 1991. Published by Academic Press, Inc. 21             |
|  |  | Timofeev, et al., "Regioselective Immobilization of Short Oligonucleotides to Acryl Copolymer Gels," <i>Nucleic Acids Research</i> , <b>24</b> , No. 16, pp. 3142-3148, 1996. Published by Oxford University Press.                            |
|  |  | Proudnikov, et al., "Chemical Methods of DNA and RNA Fluorescent Labeling," <i>Nucleic Acids Research</i> , <b>24</b> , No. 22, pp. 4535-4532, 1996. Published by Oxford University Press.   |
|  |  | Parinov, et al., "DNA Sequencing by Hybridization to Microchip Octa- and Decanucleotides Extended by Stacked Pentanucleotides," <i>Nucleic Acids Research</i> , <b>24</b> , No. 15, pp. 2998-3004, 1996. Published by Oxford University Press. |
|  |  | Guschin, et al., "Manual Manufacturing of Oligonucleotide, DNA, and Protein Microchips," <i>Analytical Biochemistry</i> , <b>250</b> , pp. 203-211, 1997. Published by Academic Press.   |
|  |  | Fotin, et al., "Parallel Thermodynamic Analysis of Duplexes on Oligodeoxyribonucleotide Microchips," <i>Nucleic Acids Research</i> , <b>26</b> , No. 6, pp. 1515-1521, 1998. Published by Oxford University Press.                             |

|   |  |
|---|--|
|   | Proudnikov, et al., "Immobilization of DNA in Polyacrylamide Gel for the Manufacture of DNA and DNA-Oligonucleotide Microchips, <i>Analytical Biochemistry</i> , <b>259</b> , pp. 34-41, 1998. Published by Academic Press.                                  |
|   | Wang, et al., "Polishable and Renewable DNA Hybridization Biosensors," <i>Anal Chem</i> , <b>70</b> , pp. 3699-3702, 1998. Published by the American Chemical Society.   |
|   | Alvarez-Blanco, et al., "A Novel Plasma-enhanced Way for Surface-functionalization of Polymeric Substrates," <i>Polymer Bulletin</i> , <b>47</b> , pp. 329-336, 2001. Published by Springer-Verlag.  |
|   | Ivanova, et al., "Feasibility of Using Carboxylic-rich Polymeric Surfaces for the Covalent Binding of Oligonucleotides for microPCR Applications, <i>Smart Mater. Struct.</i> , <b>11</b> , pp. 783-791, 2002. Published by Institute of Physics Publishing. |
|   | Metzger, et al., "Signal to Noise Comparison Accelr8 OptArray vs. The Leading Polymer and Silane Microarray Slide Chemistries, <i>Technical Bulletin</i> , No. TB0400, 2002.   |
|   | Yang, et al., "DNA-modified Nanocrystalline Diamond Thin-films as Stable, Biologically Active Substrates," <i>Nature Materials</i> , <b>1</b> , No. 4, pp. 253-257, 2002. Published by Nature Publishing Group.  |
|   | Liu, et al., "DNA Probe Attachment on Plastic Surfaces and Microfluidic Hybridization Array Channel Devices with Sample Oscillation," <i>Analytical Biochemistry</i> <b>317</b> , pp. 76-84, 2003. Published by Academic Press.                              |
|   | <a href="http://www.surmodics.com/pageDetail.aspx?pagelId=10&amp;menuID=10">http://www.surmodics.com/pageDetail.aspx?pagelId=10&amp;menuID=10</a> – "Biomolecule Immobilization", website article printed on 2/19/2004.                                      |
|   | <a href="http://www.surmodics.com/pageDetail.aspx?pagelId=7&amp;menuID=7">http://www.surmodics.com/pageDetail.aspx?pagelId=7&amp;menuID=7</a> – "Photolink Manufacturing Process", website article printed on 2/19/2004.                                     |
|   | <a href="http://www.vwrcanlab.com">http://www.vwrcanlab.com</a> – "A Specific Surface for a Specific Application." Website.  |
| <b>EXAMINER</b>   | <b>DATE CONSIDERED</b>   |
| <p>* <b>EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.</p> |  |